CLAIMS

1. A method of discovering and operating a payload node, comprising:

in a computer network having a central node coupled to a payload node slot, coupling the payload node to the payload node slot;

the payload node executing a payload boot algorithm located at the payload node;

the payload boot algorithm discovering a hardware capability set of the payload node;

communicating the hardware capability set to a payload discovery manager at the central node;

the payload discovery manager selecting a software set based on the hardware capability set;

the payload discovery manager communicating the software set to the payload node; and

the payload node transitioning from the payload boot algorithm to the software set while bypassing rebooting the payload node to the software set.

2. The method of claim 1, wherein the software set comprises a transition module and an operating system module, wherein transitioning comprises the transition module transitioning the payload node from the payload boot algorithm to the operating system module.

3. The method of claim 2, wherein the transition module transitions the payload node from the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

4. The method of claim 2, wherein the payload discovery manager selects the transition module based on the hardware capability set and the software set selected.

5. The method of claim 2, wherein the payload discovery manager selecting the transition module to transition the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

6. The method of claim 1, wherein selecting comprises selecting the software set to optimize the computer network.

7. The method of claim 1, wherein the computer network is a backplane-based computer network.

8. The method of claim 1, further comprising:

removing the payload node from the payload node slot;

changing the hardware capability set to a second hardware capability set;

coupling the payload node to the payload node slot;

the payload boot algorithm discovering the second hardware capability set;

communicating the second hardware capability set to the payload discovery manager;

the payload discovery manager selecting a second software set based on the second hardware capability set and communicating the second software set to the payload node; and

the payload node transitioning from the payload boot algorithm to the second software set bypassing rebooting the payload node to the second software set.

9. In a payload node, a method, comprising:

upon coupling the payload node to a payload node slot in a computer network having a central node, the payload node executing a payload boot algorithm located at the payload node;

the payload boot algorithm discovering a hardware capability set of the payload node;

communicating the hardware capability set to a payload discovery manager at the central node; and

upon the payload discovery manager selecting a software set based on the hardware capability set and communicating the software set to the payload node, the payload node transitioning from the payload boot algorithm to the software set while bypassing rebooting the payload node to the software set.

10. The payload node of claim 9, wherein the software set comprises a transition module and an operating system module, wherein transitioning comprises the transition module transitioning the payload node from the payload boot algorithm to the operating system module.

11. The payload node of claim 10, wherein the transition module transitions the payload node from the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

12. A computer network, comprising:

a central node;

a payload discovery manager located at the central node, wherein the payload discovery manager is coupled to select a software set;

a payload node slot coupled to the central node;

a payload node coupled to interface with the payload node slot, wherein the payload node comprises a hardware capability set; and

a payload boot algorithm located at the payload node and coupled to execute when the payload node is coupled to the payload node slot, wherein the payload boot algorithm discovers the hardware capability set and communicates the hardware capability set to the payload discovery manager, wherein the payload discovery manager selects the software set based on the hardware capability set and communicates the software set to the payload node, and wherein the payload node transitions from using the payload boot algorithm to using the software set while bypassing rebooting to the payload node to the software set.

13. The computer network of claim 12, wherein the software set comprises a transition module and an operating system module, and wherein the transition module transitions the payload node from the payload boot algorithm to the operating system module.

14. The computer network of claim 13, wherein the transition module transitions the payload node from the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

15. The computer network of claim 13, wherein the payload discovery manager selects the transition module based on the hardware capability set and the software set selected.

16. The computer network of claim 13, wherein the payload discovery manager selects the transition module to transition the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

17. The computer network of claim 12, wherein the payload discovery manager selects the software set to optimize the computer network.

18. The computer network of claim 12, wherein the computer network is a backplane-based computer network.

19. A computer-readable medium containing computer instructions for instructing a processor to perform a method of discovering and operating a payload node, the instructions comprising:

in a computer network having a central node coupled to a payload node slot, upon coupling the payload node to the payload node slot the payload node executing a payload boot algorithm located at the payload node;

the payload boot algorithm discovering a hardware capability set of the payload node;

communicating the hardware capability set to a payload discovery manager at the central node;

the payload discovery manager selecting a software set based on the hardware capability set;

the payload discovery manager communicating the software set to the payload node; and

the payload node transitioning from the payload boot algorithm to the software set while bypassing rebooting the payload node to the software set.

20. The computer-readable medium of claim 19, wherein the software set comprises a transition module and an operating system module, wherein transitioning comprises the transition module transitioning the payload node from the payload boot algorithm to the operating system module.

21. The computer-readable medium of claim 20, wherein the transition module transitions the payload node from the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

22. The computer-readable medium of claim 20, wherein the payload discovery manager selects the transition module based on the hardware capability set and the software set selected.

23. The computer-readable medium of claim 20, wherein the payload discovery manager selecting the transition module to transition the payload boot algorithm to the operating system module while bypassing rebooting the payload node to the operating system module.

24. The computer-readable medium of claim 19, wherein selecting comprises selecting the software set to optimize the computer network.

25. The computer-readable medium of claim 19, wherein the computer network is a backplane-based computer network.